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09/737,968	12/18/2000	Masahiko Sugimoto	1982-0161P	9946

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EXAMINER

JERABEK, KELLY L

ART UNIT PAPER NUMBER

2622

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/737,968	<b>Applicant(s)</b> SUGIMOTO ET AL.	
	<b>Examiner</b> Kelly L. Jerabek	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 11 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-12, 15-19 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 6-7, 13-14 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 5/11/2006 have been fully considered but they are not persuasive.

### **Response to Remarks:**

Applicant's arguments (Amendment page 10) state that the Hashimoto reference states that the start and stop positions are calculated within the range based upon a mathematical calculation of addition and subtraction based upon a variable number, not a predetermined condition. The Examiner respectfully disagrees. Hashimoto states that a CPU (15) carries out infrared active AF processing in order to detect the distance between the pickup apparatus and a subject (col. 8, lines 11-28). **The CPU (15) compares the detected subject distance with a predetermined value stored in advance in EEPROM (25) and performs auto-focus processing in a first range or a second range depending on whether the detected distance is greater or less than the predetermined value (col. 8, lines 4-52). Therefore, it can be seen that the program logic (autofocus processing) of the CPU (15) is performed in accordance with predetermined conditions (predetermined distance data and predetermined calculations) stored in memory.** Since active AF processing is based on

**predetermined calculations** and the calculation result is compared to a **predetermined distance** the Examiner is reading the active AF processing as program logic in accordance with predetermined conditions as claimed.

Applicant's arguments (Amendment pages 10-11) state that the Hashimoto reference fails to teach determining a start position and a direction of search from the start position based on predetermined data. The Examiner respectfully disagrees. Hashimoto discloses in figure 1 an electronic image pickup apparatus for forming an image of an object. The electronic image pickup apparatus includes a focusing lens group (3) that is movable along an optical axis in order to focus an image of a subject and an image sensor (5) for forming a subject image (col. 4, lines 38-50). A focus motor (22) is provided in order to move the focusing lens group (3) along the optical axis to an in-focus state (col. 7, lines 43-53). In addition, the electronic image pickup apparatus includes a central processing unit (15) that is electronically connected to both the image sensor (5) and the focus motor (22) as shown in figure 1. The CPU (15) carries out infrared active AF processing in order to detect the distance between the pickup apparatus and a subject (col. 8, lines 11-28). The CPU (15) compares the detected subject distance with a predetermined value stored in advance in EEPROM (25) and performs auto-focus processing in a first range or a second range depending on whether the detected distance is greater or less than the predetermined value (col. 8, lines 4-52). Therefore, it can be seen that the program logic (autofocus processing) of the CPU (15) is performed in accordance with predetermined conditions (predetermined

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distance data and predetermined calculations) stored in memory. **When the CPU (15) performs autofocus processing in both the first range and the second range, the CPU (15) determines a start point (B1) of a search and one of two directions (first end position and second end position) for an in-focus position and controls the motor (22) to move the focusing lens group (3) from the start point (B1) until an in-focus position is reached based on analyzing electronic information received from the image sensor (5) (col. 12, line 38-col. 14, line 27; figures 6-8).**

Applicant's argument, see Amendment pages 11-12, filed 5/11/2006, with respect to claims 6, 13 and 20 have been fully considered and are persuasive. The rejection of claims 6, 13 and 20 has been withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-5, 8-12, 15-19 and 21-23 rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto US 6,704,054.**

Re claim 1, Hashimoto discloses in figure 1 an electronic image pickup apparatus for forming an image of an object. The electronic image pickup apparatus includes a focusing lens group (3) that is movable along an optical axis in order to focus an image of a subject and an image sensor (5) for forming a subject image (col. 4, lines 38-50). A focus motor (22) is provided in order to move the focusing lens group (3) along the optical axis to an in-focus state (col. 7, lines 43-53). In addition, the electronic image pickup apparatus includes a central processing unit (15) that is electronically connected to both the image sensor (5) and the focus motor (22) as shown in figure 1. The CPU (15) carries out infrared active AF processing in order to detect the distance between the pickup apparatus and a subject (col. 8, lines 11-28). The CPU (15) compares the detected subject distance with a predetermined value stored in advance in EEPROM (25) and performs auto-focus processing in a first range or a second range depending on whether the detected distance is greater or less than the predetermined value (col. 8, lines 4-52). Therefore, it can be seen that the program logic (autofocus processing) of the CPU (15) is performed in accordance with predetermined conditions (predetermined distance data and predetermined calculations) stored in memory. When the CPU (15) performs autofocus processing in both the first range and the second range, the CPU (15) determines a start point (B1) of a search and one of two directions (first end position and second end position) for an in-focus position and controls the motor (22) to

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move the focusing lens group (3) from the start point (B1) until an in-focus position is reached based on analyzing electronic information received from the image sensor (5) (col. 12, line 38-col. 14, line 27; figures 6-8).

Re claim 2, Hashimoto states that when the CPU (15) performs autofocus processing in both the first range and the second range, the CPU (15) determines a start point (B1) of a search and one of two directions (first end position and second end position) for an in-focus position and controls the motor (22) to move the focusing lens group (3) from the start point (B1) until an in-focus position is reached based on analyzing electronic information received from the image sensor (5) (col. 12, line 38-col. 14, line 27; figures 6-8). Therefore, it can be seen that the focusing lens is movable forward and backward along the optical axis and the program logic determines in accordance with the predetermined conditions to search one of forward and back from the start point along the optical axis for an in-focus position.

Re claim 3, Hashimoto states that the CPU (15) compares a detected subject distance with a predetermined value and performs autofocus processing in a first range or a second range depending on whether the detected distance is greater or less than the predetermined value (col. 8, lines 4-52).

Re claim 4, Hashimoto states that during autofocus processing, once the focus lens group (3) reaches the calculated stop position, the CPU (15) calculates an in-focus position (col. 13, lines 15-65).

Re claim 5, Hashimoto states that if the focus lens group (3) has not reached the stop position (lens is not yet in an in-focus position) the CPU (15) obtains an AF evaluation value and moves the focus lens group (3) by a predetermined amount (col. 13, lines 22-33). Therefore, if the focus lens group (3) has not yet reached the stop position (search for an in-focus position unsuccessful) the program logic controls the motor to move the focusing lens to a predetermined position.

Re claim 8, see claim 1.

Re claim 9, see claim 2.

Re claim 10, see claim 3.

Re claim 11, see claim 4.

Re claim 12, see claim 5.



Re claim 15, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 15, see claim 1.

Re claim 16, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 16, see claim 2.

Re claim 17, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 17, see claim 3.

Re claim 18, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 18, see claim 4.

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Re claim 19, Hashimoto states that the electronic imaging apparatus includes a CPU (15). The CPU (15) includes a recording medium (25) that stores programs from implementing various control functions (col. 5, lines 30-34). For the rest of claim 19, see claim 5.

Re claims 21-23, Hashimoto states that the search area of the image within the imaging position is determined in accordance with the predetermined conditions (col. 8, lines 4-52).

***Allowable Subject Matter***

**Claims 6-7, 13-14 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

Re claims 6, 13 and 20, the prior art fails to teach or suggest, "A device and method for forming an image of a subject, the device comprising: (a) a focusing lens having an optical axis, with the focusing lens being movable along the optical axis for focusing an image of the subject at an imaging position; (b) a motor connected to the focusing lens, operable for causing the focusing lens to move along the optical axis; (c) an image sensor having a sensing surface located at the imaging position, which produces electronic information in accordance with images on the sensing surface; and

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(d) a central processing unit electronically connected to the image sensor and receiving electronic information from the image sensor, and electronically connected to and controlling the motor, the central processing unit having a memory and program logic, in which the program logic in accordance with predetermined conditions stored in the memory, the predetermined conditions having been set in advance, determines a starting point of a search of one of two directions of search from the start point for an in-focus position of an image of the subject on the imaging position, and control operation of the motor to move the focusing lens to the start point, and to move the focusing lens from the start point in the determined direction of search until an in-focus position is reached based on analyzing electronic information received from the image sensor, **wherein the predetermined conditions are photographic modes including at least a close-up mode, a landscape mode and a night scene mode**".

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ito (US 2001/0050718) discloses a focus control apparatus and method for use with a video camera. The information regarding determining a start point and search direction for focus control is relevant material.

Ohkawara (US 2002/0154241) discloses a video camera system with an interchangeable lens assembly. The information regarding determining a start point for focus control is relevant material.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### ***Contacts***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is (571) 272-7312. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for submitting all Official communications is (703) 872-9306. The fax phone number for

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submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at (571) 273-7312.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ



VIVEK SRIVASTAVA  
PRIMARY EXAMINER